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INDIAN SEAFOODS

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ON THE COVER

India is today the world's largest producer of shrimp. Along the country's 5,600 km coastline fishing is the traditional occupation for over a million people in some 2000 villages. Here we see typical fisherfolk from Tamil Nadu, a fast-growing maritime State on the south east coast of India.

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ISSUED BY THE MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY, COCHIN - 682 016

CHAIRMAN SPEAKS

(Excerpts from the speech deilvered by Mr. S. G. SUNDARAM, I. A. S., Chairman of the MPEDA, at the 14th meeting of the Authority at Cochin on 21st October, 1977)

It gives me immense pleasure in welcoming you to this 14th meeting of the Marine Products Export Development Authority. On behalf of all other members of the Authority I also wish to extend a hearty welcome to the new members namely Shri Vayalar Ravi and Shri Sakti Kumar Sarkar, Members of Parliament, Smt. S. L. Singla, Jt. Secretary (Fisheries) Ministry of Agriculture & Irrigation; Shri L. C. Gupta, Secretary to the Government of Maharashtra; Shri J. Sanyal, Deputy Secretary, Ministry of Commerce; and Shri S. Gurumurthy, Deputy Secretary, Finance Division in the Ministry of Commerce.

Shri K. Chidambaram, the first Director of the MPEDA retired on 31st August, 1977, after rendering a devoted service to this organisation since its very inception. I wish to take this opportunity to place on record our deep appreciation of the outstanding services rendered by him. The new Director Dr. T. A. Mammen, assumed office on 15th October. While welcoming him to this meeting I also wish him all success in his new assignment.

As you are aware, I assumed Office as Chairman of the MPEDA on 16th February, 1977. As an organisation like the MPEDA cannot effectively function without the active co-operation of the trade and industry I took them into confidence, had detailed discussions with the leaders of the trade and have been able to secure their co-operation for the smooth sailing of the Authority.

Some of the major schemes which had already been initiated by the MPEDA were at different stages of implementation. The project for setting up a 1000–tonne Cold Storage at Cochin was reviewed and a revised proposal for setting up a 500–tonne capacity frozen storage at Cochin was submitted to the Ministry. Another proposal for setting up a 300-tonne capacity frozen storage at Calcutta was also submitted to the Ministry. Both the proposals have been approved by the Ministry and are expected to be taken up for implementation during the current year itself.

I have pleasure to inform you that, after approval of the Ministry, we have entrusted the task of execution of the project on turn-key basis to the National Dairy Development Board. Dr. V. Kurian, Chairman of the NDDB has agreed to mobilise their own staff for executing our frozen storage project on turn-key basis. We feel that their expertise would benefit us in our venture of setting up of frozen storages at Cochin and other important ports in the country.

In view of the delay involved in the development of fishing harbours, we have planned to take certain measures urgently for improving the landing facilities. The action proposed is to provide cemented platforms at important landing centres under a phased programme. Ministry has agreed to this proposal in principle and it is expected that during the current year facilities could be provided at important centres in Maharashtra, Tamilnadu, Kerala, Andhra Pradesh and Karnataka.

The Marine Products Export Development Authority has recently taken certain important steps for increasing the unit value realisation of marine products exported from India. Since March 1977 onwards,

we have been publishing a weekly price indicator for marine products, entitled "PRIME" containing latest price trends for seafood products in major overseas markets, especially Japan and the U.S. This publication is mailed free-of-cost to all Registered Exporters of marine products.

I had occasion to visit Japan in June 1977, in connection with the Authority's participation in the 5th International Frozen Food Industry Exhibition at Tokyo. Along with the Indian seafood exporters who attended the Fair, I had a series of meetings with the Japan Marine Products Importers' Association. The dialogue was a meaningful exercise and various outstanding problems, were sorted out, discussed in detail and amicably settled. After these discussions the Japanese buyers assured to me that they are prepared to pay still higher prices for our products, provided the quality is good and supplies are regular. They have also promised to co-operate with India's efforts in product diversification and joint ventures for development of deep sea and off-shore fishing.

The Authority has recently made a study in depth of the Japanese shrimp market. Based on this study a publication entitled "A note on Japanese Shrimp Market" has been prepared indicating the market structure, consumer behaviour, composition, pattern of supply, extent of competition, channels of distribution, terms of trade etc. Copies of this publication have been mailed to all seafood exporters to Japan on complimentary basis, apart from members of the Authority and officials in the Ministry etc. We are planning to undertake similar studies in respect of other major markets also.

As part of our quality improvement programme the Authority is formulating a scheme for educating the workers in the seafood industry, particularly in the fishing and preprocessing sectors on the need for maintaining proper quality, health and hygiene standards, at all stages from catch to processing through packing and export. Detailed proposals have been submitted to the Ministry for approval.

A problem requiring immediate redressal arose recently due to the revenue recovery proceedings resorted to by the Kerala Government against the seafood exporters on account of the purchase tax dues for the period from 1st April, 1976. As a protest against the denial of exemption from Purchase Tax on marine products in Kerala, the Seafood Exporters Association of India decided to suspend all operations with effect from 3rd October, 1977. The Authority took up the matter immediately with the State and Central Government authorities. As a result of the discussions the Government of Kerala have agreed to make a detailed study of the various problems faced by seafood industry, including cost of production, international competition and the legal question relating to the eligibility of marine products for exemption from Purchase/Sales Tax. The State Government has also expressed its willingness to stay recovery proceedings for assessments already made for the periods after 1st of April, 1976. We have in the meanwhile apprised the Commerce Ministry also of the seriousness of the problem and sought the Central Government's intervention for an amicable solution for the same. I am confident that with the active co-operation of the concerned departments in the State and Central Government and the export trade, a reasonable solution

A view of the 14th meeting of the MPEDA

to this burning problem could be arrived at.

I need hardly stress on the vital role that the MPEDA can play in developing the seafood industry in India, particularly the export production sector. Urgent action has to be taken for conservation of fishery resources. Most of the maritime nations have enforced very strict conservation measures such as closed seasons for fishing, regulation of mesh sizes etc. Initially conservation may affect certain sectors of fishermen temporarily. But in the long run, it will be beneficial to all sectors in the industry. Large scale shrimp and fish culture projects have also to be taken up at the national level, as is being practised in Indonesia, South Korea etc. Side by side with conservation measures, it is necessary that ways be found to increase the production of shrimp in India. In this connection I must record that we have been receiving very active co-operation from the various Central Fisheries Research and Developmental institutions in our efforts for strengthening the production base and for product diversification. The MPEDA has embarked on a co-operative intensive prawn farming project at Narakkal in collaboration with the Central Marine Fisheries Research Institute in order to increase the productivity of the estuarine regions of Kerala. The CMFRI has already co-operated with the Tamilnadu Fisheries Department and the Tamilnadu Fisheries Development Corporation to establish co-operative fish farms for breeding of prawns and fish and in a pilot project for elver culture.

Similarly, the Central Institute of Fisheries Technology, who have been doing a lot of useful research and developmental work in product development and product diversification have agreed to furnish to the Authority such information as could be suitably published for the benefit of the trade and industry in the country.

Through the good offices of the Director, the UNDP/FAO Pelagic Fisheries Project and also the Technologist Mr. Peromic from Yugoslavia, the Authority undertook experimental canning for Indian sardine, mackerel and anchovies at the Institute of Food Science and Technology, Center for Fisheries in Zadar, Yugoslavia. The report received from the Yugoslav Institute has confirmed the suitability of our sardine, mackerel and anchovies for canning at international standards and also the consumer acceptability of the final product.

On our suggestion, the Integrated Fisheries Project has also agreed to organise a few demonstrations in purse seine fishing for highlighting the rich potential of our pelagic fishery resources for the benefit of prospective entrepreneurs.

The Authority has to make arrangements for providing infrastructural, fish landing and warehousing facilities in all important centres in the country. At present, frozen shrimp alone accounts for about 85% of our total export earnings from marine products. Side by side with measures for increasing shrimp production, planned efforts have to be made for product diversification. There are a number of our marine products which do not have a ready market in India, but have good export potential. Similarly several non-traditional items like sardine, mackerel, tuna etc. could be added to the export stream. As you are aware, we are now tapping only a small fraction of our marine fishery resources. With the introduction of the planned deep sea fishing, in the 200–mile exclusive economic zone, fish production will be stepped up by several folds. I am confident that if proper marketing and development strategies are adopted, our export earnings from marine products could be pushed up to the level of Rs. 1000 crores per annum within the next five years.

Exports of marine products during January to August, 1977, have been the highest on record. During this period India's exports of marine products reached the level of 42,421 tonnes valued at Rs. 119.70 crores as against 41,211 tonnes worth Rs. 113.87 crores during the corresponding period last year. In other words, the exports during the last eight months increased by 2.94% in quantity and 5.83% in terms of value.

Let me take this opportunity also to record a word of thanks to the Officers in the Ministries of Commerce, Agriculture, Finance and Industry, whose constant support and co-operation have been of immense help to us. They have often borne patiently with our difficulties and have excused our minor defects. Before I conclude, I would like to thank all members, the Vice-Chairman and other colleagues for the whole-hearted support and guidance I have received in the discharge of my responsibilities. I am also thankful to the Directors of Fisheries of all maritime states, the Central Fisheries Institutes under the ICAR and the Export Inspection Council of India for the co-operation and assistance I received.

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RECENT ADVANCES IN BRACKISHWATER PRAWN AND FISH FARMING IN INDIA

Dr. V. G. JHINGRAN
Director
Central Inland Fisheries Research Institute, Barrackpore

Brackishwater impoundments, locally known as Bheris, Nonagheris, Bhasa-badha etc. in West Bengal and Pokkali in Kerala, have a long history and may be considered as developments based on long years of experience. The traditional method of this age-old practice is to enclose a space by constructing earthen perimeter dykes and provide it with water gates through which tidal water go in and flood the impoundment. Alongwith tidal water, the young of all available species of prawn and fish are also impounded. Such uncontrolled entry of wanted and unwanted young fish leads to unhealthy competition for food and space by incompatible species and predation by carnivorous organisms and results in unpredictable crop, generally of a low magnitude. It also results in a large scale wastage of stocking material which can, otherwise, be profitably utilised in extended areas if a scientific management policy with proper control is pursued.

Research investigations during the last decade have laid the foundation of scientific farming and it is now expected that the application of modern technology will enhance the yield potential by an appreciable extent and will help support the fish export industry on the one hand and will help fill the protein gap in the country on the other.

The first step taken in this direction is the understanding of the pattern of distribution and seasons of availability of prawn and fish seed. As stated above, it has been the practice to impound brackishwater prawn and fish seed through tidal ingress. The period of ingress was limited to a few months of the year and the entrapped organisms were allowed to grow in the "bheri" over a specified period of time generally varying between 7 to 9 months. In such a situation, the farmer could not be sure about the quantity which might have ingressed into the water and consequently there was a danger of poor stocking, if it happened to be an off season for quality prawn/fish seed, or of overstocking if the reverse situation had prevailed, due to uncontrolled entry leading to poor growth and high rate of mortality. In both the cases, the production was of a low order. If, however, a high percentage of carnivorous fish gained entrance in the "bheri" with unrestricted flow of water, a production of very low magnitude was obtained.

Detailed seed prospecting investigation carried out in the estuaries and lagoons of West Bengal and Orissa has enabled an understanding of the pattern of distribution and abundance of brackishwater prawn and fish seed during different months of the year and their relation with the prevailing hydrological conditions. This knowledge has helped to build up a system of controlled stocking with selected species in specified proportion and combinations. Such a system is based on nursery pond management.

The next step towards advancement is the development of management techniques for culture. In the traditional pattern, preparation of the pond before stocking was often a neglected aspect. With the increasing demand for quality prawn it has now been realised by the farmer that pond preparation is a must for increased production. Recently developed technology envisages removal of stumps, roots and excessive amount of undecayed organic matter, levelling of the pond bottom, complete elimination of predators and competitors by thorough draining and drying of the pond before the stock is introduced.

Water management through regulated entry of the tidal water and periodic draining out of the stored water of the farm pond to reduce the accumulated metabolite load on one hand and to oxygenate the pond water on the other has helped to boost up production in brackish water ponds.

Development of nursery management techniques to step up survival and growth of the postlarvae to

juvenile stage is another significant advancement. It has been a matter of common experience that the survival rate of prawn was extremely low in the traditional method of culture, averaging around 10 to 20%. With proper pond preparation and water management it is now possible to obtain a survival rate of 60–65% of *Penaeus monodon* at the nursery stage with a stocking density of 200/cu.m. of water. This new technology has helped to solve the problem of obtaining stocking material for selective culture in large brackishwater bodies.

The nursery management technique for mullet culture developed in recent years has enabled more than 90% survival with proper water management and supply of artificial feed at a stocking density of 5,00,000 fry per hectare. The development of this technology indicates the high potential of brackishwater ponds to produce rich crop of fingerlings suitable for stocking in larger bodies of brackishwater impoundments for culture.

The technology developed for culture of bagda, *Panaeus monodon* is spectacular. By selective stocking of almost identical sized juveniles @ 40,000/ha, a production of 836kg/ha/210 days was possible under experimental conditions through judicious manipulation of the stock and water management. By reducing the length of the culture period to 160–180 days two crops totalling to about 1,000 kg/ha/yr is now possible.

In the field of mono-species culture of mullet, *Liza tade,* a production of 1427 kg/ha/annum was obtained. By lengthening the culture period to 17 months a production of 2,238 kg/ha could be obtained at the stocking density of 6,000/ha.

The feeder canals of the farm ponds are generally not used for raising fish, even in countries like Philippines, Taiwan and Indonesia. We have used this water area for raising carnivorous fish, like bhetki, *Lates calcarifer*. A simple device to let in fish and prawn alongwith tidal ingress to serve as food for bhetki has enabled production of 2,760 kg/ha/annum.

Another significant advancement has been the development of the technology of mixed farming of different species of penaeid prawns and mullets. In a six species combination of prawns and fishes, *Penacus monodon, P. indicus* and *Metapenaeus monoceros* among prawns and *Liza parsia, Liza tade* and *Mugil cephalus* amongst mullets, a net production of 2,671 kg/ha/annum was achieved.

Summing up, it may be stated that recent development of the technology for selective stocking and culture in brackishwater ponds is capable of increasing the production by 3–4 times over those obtained by conventional methods hitherto followed by bheri operators and pokkali operators. The rate of production from the traditional methods is low, rarely exceeding 750 kg/ha/annum. Introducing the technology already developed over the existing area under cultivation, it may reasonably be expected that, the present production can be boosted up at least three times if not more. Further, India has a vast potential area estimated at about 2 million hectares where land can be developed for brackishwater aquaculture. If the total area is developed and improved technology introduced an additional production of about 2 million tonnes of prawn and fish can be expected at a conservative estimate of 1,000 kg/ha, which will not only be able to sustain a rich export industry but will also solve the problem of supplying the much needed protein food to our countrymen. Most of these areas being situated in neglected countryside, the development of these sites will help rural development and consequently ensure development of rural economy.

A NEW LOOK ON FISH AND FISHERY PRODUCTS THROUGH INPROCESS QUALITY CONTROL

J. C. AMBAT
Deputy Chief Executive,
Export Inspection Agency—Cochin

Quality Control in food items parallels the history of food production. The history repeats itself in showing the fact that every food manufacturer, handler and consumer attempted to evaluate, maintain, and control the quality of the food items used, and during this process, the various attributes of quality were measured, and decisions made on the basis of sensory, which is nothing but human evaluation. It cannot be denied that a tremendous development has now been made on instrumental methods for measuring food quality, and interpretation of results by statistical methods, which has set in through the years. But the codification attempts being made to bring the same to a distinct discipline, relate to only a last few decades. Even this has also been not completely successful to replace the unaided human monitor of quality. Thus, it goes to say that these factors exist only to aid the human observation of quality.

When one goes for evaluation of the quality of food items, the cardinal parameters to be observed are measurement of appearance and textural properties, organoleptic evaluation, statistical reporting and interpretation of data. Three areas are thus important here on the aspect of quality control—the measurement, the reporting and the decision making functions. Since food quality is ultimately judged by the consumers, it is nothing but logical to organise the above decisions in accordance with the human senses involved in the judgement.

In sensory evaluations, there are positive attributes, which are categorised into appearance as observed by eye, kinesthetics as felt by hand or mouth, and flavour as tasted and smelled by mouth and nose. The hidden attributes, which can be classified into the categories of wholesomeness and adulterations, are naturally unattainable to the consumer using his senses. While attempting at a scientific judgement of the above factors, it is necessary to have application of measurements by utilizing and integrating the individual test procedures into grades and standards of quality, sampling and reporting the values to support the scientific decision-making.

Quality Control—its relation to production

There is no doubt that quality control plays a vital role in the quantum of production, the rate of production, perfection in production and finally the productivity. It also plays a significant role in marketing the products, and in the research and development. Since the customer preferences never remain static, he being the master, and also quality being dynamic, a constant appraisal of the markets and consequent improving of the products to suit the changing consumer requirements, tells upon the efficiency of the management and finally to the profitability margin. The following Chart will give the position of quality control in a production unit with its relevance to the production, R & D division, sales and purchasing:–

If Quality Control, which plays so much an important role in production, is the major concern of management in a food processing plant, how far it is being cared to in India? The concept of quality control in an organised way has no much history to its credit in the Indian context. When we reduce our thinking to the quality control efforts in Fish & Fishery products industry in India, it could be known that it distinctly emanates from 1965 onwards, when compulsory

preshipment inspection was introduced in this item as per the Export (Quality Control & Inspection) Act, 1963.

The trade was made to understand that quality control has so much vital role to play in this industry and in the area of marketing to which it caters. Much waters having been flown, we should atleast start now our efforts on quality control in this industry. The initial momentum from the industry's side was not bad, as it very quickly adopted to the requirements of quality specifications of the sophisticated markets. As quality control efforts progress in India, it will be a history of increase of the level of confidence in the buyers abroad for this item.

Eventhough our efforts on quality control, to begin with, was limited to the sensory evaluations, gradually samples were drawn and subjected to laboratory tests for microbiological aspects, viz. detection of pathogenic bacteria and evaluation of Total Plate Count. By the existing end-product inspection system, the processors were indirectly compelled to improve upon their processing facilities, sanitary and hygienic conditions, and the processing drills.

Through the operation of quality control by the end-product evaluation through preshipment inspection, as it exist now, the industry gradually came into the confidence of subjecting their processing efforts to in-process inspection drills. In a meeting held at Cochin on 20th July 1977 with the All-India Fish Exporters, the trade unanimously accepted the Government's proposal of subjecting their processing drills to Inprocess Quality Control. This will definitely go down as an epoch-making event. What are the advantages if it is a big leap forward?

(1) As the fish processing industry in India is yet to reach an organised stature, the quality of the end-product depends upon a few variables. The processor is always at the mercy of these variables, which may, perhaps, be beyond his control. If quality control efforts by a Government agency are instituted atleast from the raw material acceptance stage at the factory, in case the raw material is of sub-standard level, then by rejection of the material at that stage itself, wastages could be avoided which otherwise would have occurred from processing inputs. Apart from the financial gain to the processor, it avoids a last minute embarassment through a rejection at the last point with the resultant failures in fulfilling contracts.

(2) Thus, the processing inputs will be made available only to a material which is sure of passing the quality standards. This ultimately results in gross productivity of the unit, which is nothing but a contribution to the national wealth.

(3) The delay and the lead time for availability of test reports before issuance of an export-worthy certificate after the consignment is made ready for export, can be brought down considerably as such evaluation would have already been undertaken in the different stages of evolution into a finished product, and the certificates can be obtained from the Agency across the table.

(4) The present preshipment inspection activity aims at blocking any substandard product from leaving the shores of India. This is often a negative approach to the problem. Here, the advantage of the inprocess quality control will be that it is functioning for the developmental aspect of the processing drills by constant feed-back information to the processing units through testing of samples drawn from the different stages of processing, processing tables, utensils etc., which will definitely throw light into the bacteriological load and sanitary and hygienic conditions of the personnel and the equipments involved. Hence it is a positive approach aimed at the improvement of the factories to achieve the internationally accepted standards for fish processing units.

(5) Sustenance of quality of the fish export, which is now at a stage when it is looking forward for dynamic growth, is the pivot around which the entire image of Indian products depend. The Inprocess quality control will go a long way in supplying food material of consistent quality, thereby increasing the buyers' confidence with consequent increase in unit value realisation and increased return to the processors.

It is an undeniable factor that quite an unappreciable and unhealthy competition is unfortunately prevailing in this industry, which results in periodically wiping off the enthusiastic and upright industrialists in this vital sector. The unworkable raw material prices offered, subsequent involvement in quality manipulations, and several such unhealthy practices would only bring bad name to the industry and the country as well as misery to the fellow processors in the field. By inprocess quality control, a discipline will naturally set in, which will ultimately help to prevail a healthy climate for processors.

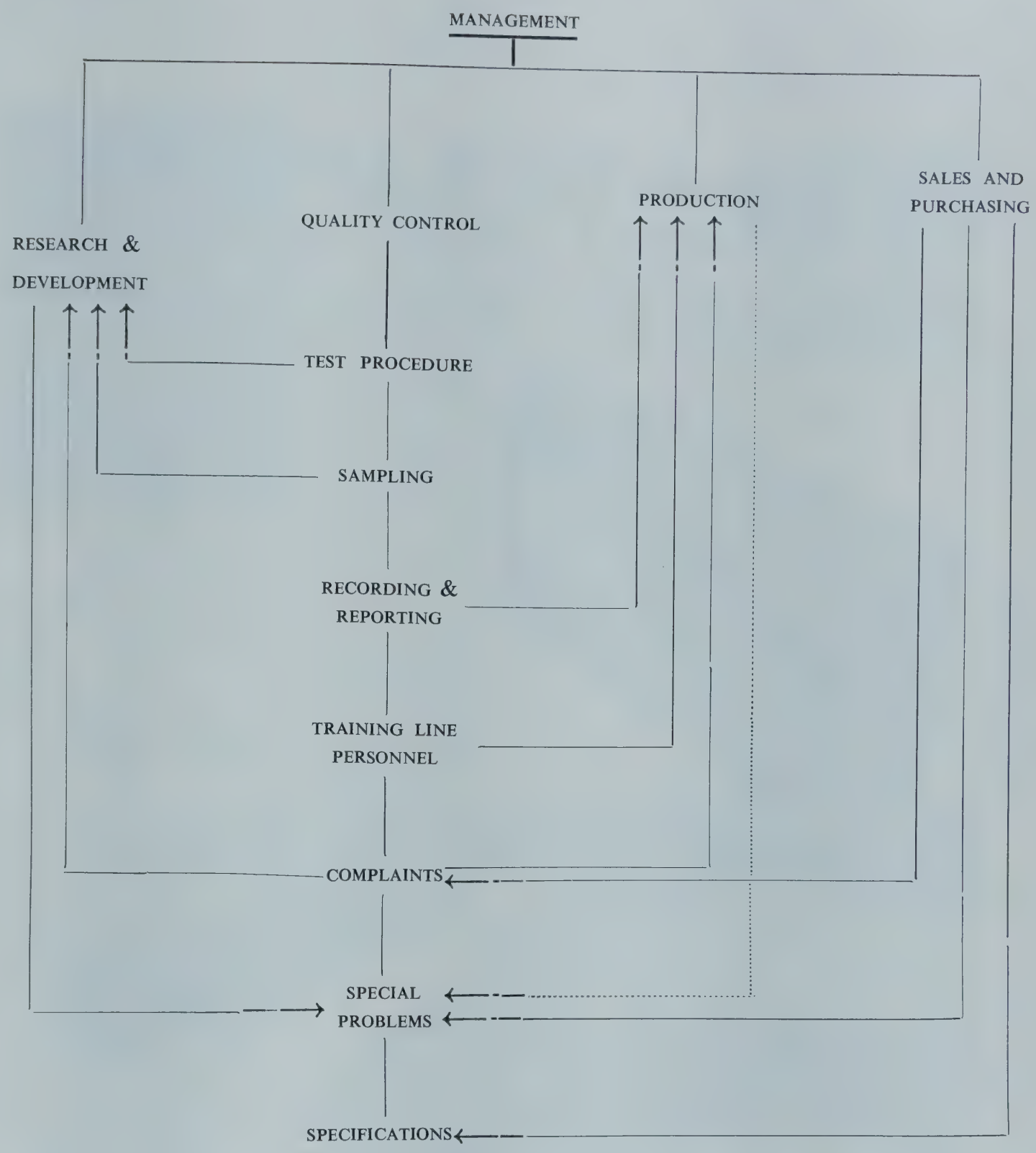

CHART: Functions of QC Department and its relationship to other departments.

The recent increase in the unit value of this highly protein-rich food material, has definitely become a major source for foreign exchange earnings. There is yet another sad point that at present 15–30% of the shrimp catch turns to be a waste due to lack of knowledge of discipline in the catching and transportation operations. The resultant discipline inculcated through Inprocess quality control will definitely have indirect impact on these areas also by the knowledge being percolated out of dire necessity when the product becomes unacceptable at the processing units. This will gradually reduce the avoidable wastage and the value of the product will also be added to the national wealth.

Hence, through the Inprocess Quality Control, the Fish and Fishery products exports would have a new look for a new emergence.

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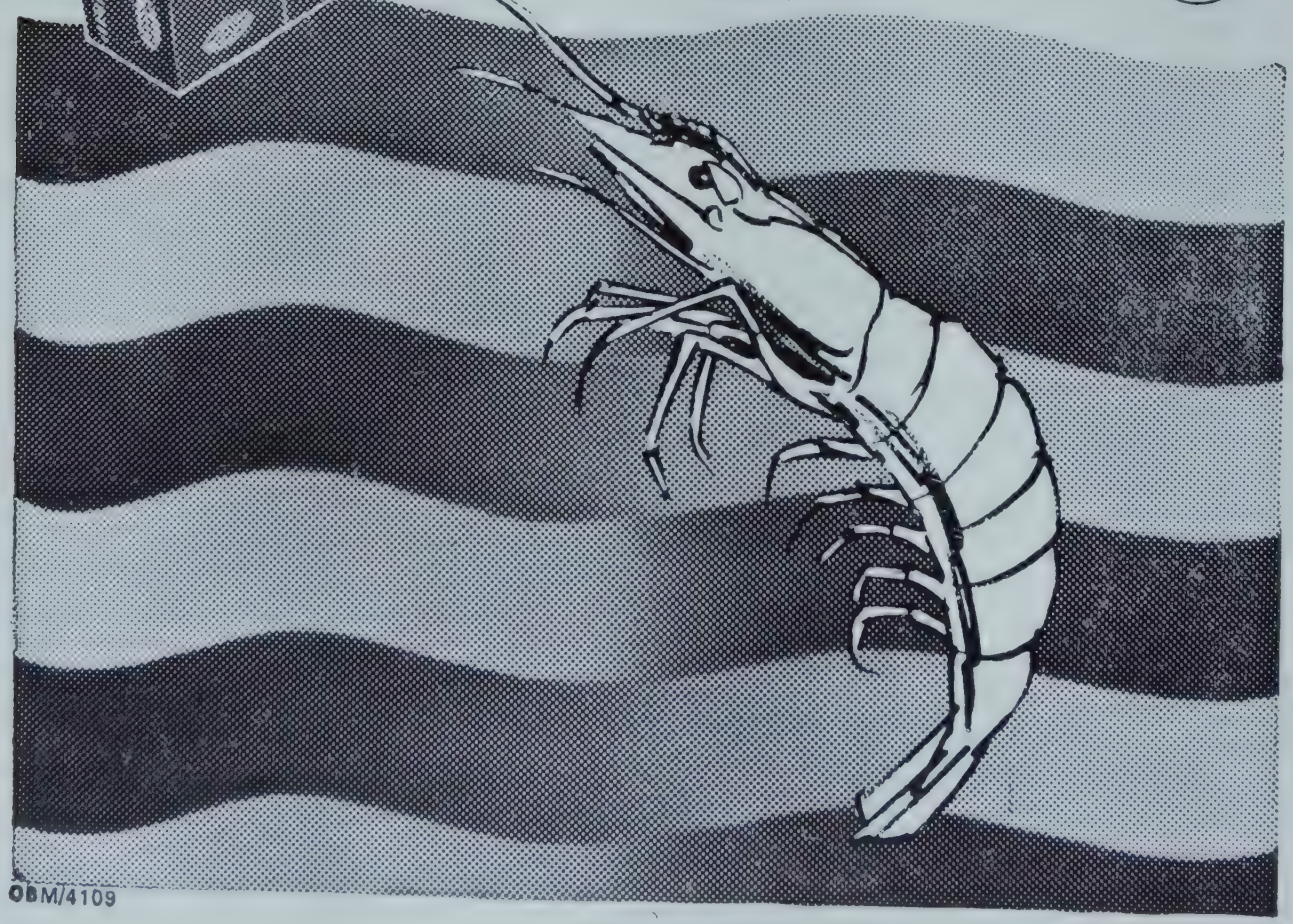

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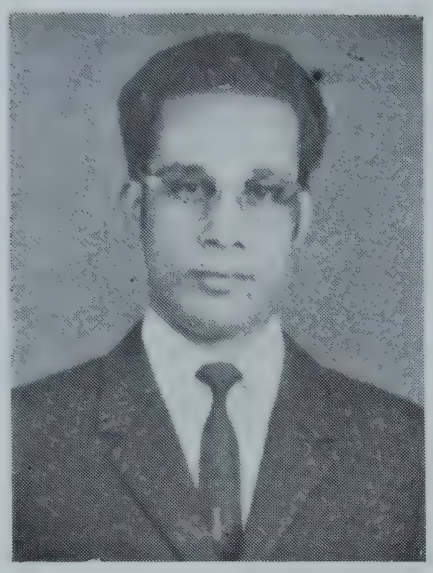
ONE BOAT MIDWATER TRAWL-A CONSTRUCTION AND RIGGING PROFILE



C. P. VARGHESE,
Integrated Fisheries Project,
Cochin–16.

Introduction

The new fishing techniques introduced in India in marine fisheries so far have been only for catching the demersal species of fishes. The technique of catching pelagic shoaling fishes with mechanised boats has been attempted only recently. The survey conducted by the Pelagic Fisheries Project revealed the availability of significant resources of pelagic fishes in our shelf area. One of the methods of tapping these resources is midwater trawling. The preliminary trials conducted by the Integrated Fisheries Project by operating single boat midwater trawl gave encouraging results and indicated the necessity for follow up investigations (Varghese 1975). As this gear is imported at present and the technical details of construction and rigging are unfamiliar, it is the purpose of this paper to outline these aspects so as to enable our technologists and fishermen to fabricate the gear locally.

History

The midwater trawl was first designed and operated by Robert Larsen of Denmark in 1948. His net was a four seam equal panel square net operated by two boats. Later, considerable success was made in Germany with one boat midwater trawl of rectangular shape and having a lower panel bigger than the upper one.

Features

Midwater trawl designs are characterised by large vertical and horizontal opening and with smooth water flow inside the net. The flow characteristics are particularly important to reduce the turbulance near the front which greatly influences the catching efficiency at high towing speeds. The smooth catenary construction on head line and foot rope with long finely tapered bag are incorporated in a successful design.

Babylon

The smooth catenary on trawl mouth is made by the construction of hang meshes at the quarter shoulder called 'Babylon'. The term 'Babylon' is adopted by Norwegian Fishing gear factories. In figure 1, the dotted line shows the position of trawl mouth without Babylon which reveals the necessity to make framing lines nearer to fishing shape. The hang meshes at the quarter shoulder are fabricated with double twine.

Construction

The all bar wing is joined at A (Figure 1) to the belly with double mesh. From the bosum of the belly, one mesh (2 bars) is cut at B and double meshes are made instead with the same gauge. Now to reach the joining lines of bosum and wing 3 bars have to be fabricated i.e. 2 cut bars and one joining bars.

Next step is the construction of Babylon. The number of Babylon for each design may vary and is arrived after trial and error to suit the catenary shape. The construction of Babylon 3–7–6 in design 6 x 6 F quadratic midwater trawl (Figure 2) is done in the following way. When 3 meshes are added to this, the base meshes will be 19 (refer figure 1). Out of 3 meshes, two are for wing and double meshes and one for double knot at the beginning of Babylon(C).

Babylon 3-7-6 means construction of 3 hand meshes at an interval of one bar (one bar Babylon equals to IP IB), next 7 hang meshes at an interval of 2 bars (2 bar Babylon equal to IP 2B) and last 6 meshes at an interval of 4 bars (4 bar Babylon equal to IP 4B) to form a smooth Catenary at the corner of bosum (Figure 1).

Before fabricating the Babylon, the alternate bar from the edge of wing is cut so as to form the edges with fly meshes. Now after making 19 knots at the base, Babylon is fabricated as shown in figure 3.

At the end of Babylon, 2 rows of meshes at the edge (D) are fabricated at a rate of 13 on 14 meshes which help to reduce the distortion of wing meshes hung after stretching (outstretch). All these fabrications are done only with double meshes. At the end of wing one bar is made double.

Hanging

At bosum near Babylon, five meshes are hung closer than normal hanging which reduce the strain at the quarter (Figure 4). The hanging looseness in Babylon is about a bar length in each section i.e. in one bar, two bar and 4 bar Babylon. Although the meshes in the wing end after Babylon are stretched, it does not affect the meshes below one row because of the fabrication of 13 double meshes on 14 meshes. The length of outstretch 2.25 m in the design (Fig. 2) means, the difference in length of wing vertical measurement (8 m) and diagonal measurement (b & c) after stretching which is 10.25. Practically it was found successful in hanging the meshes after outstretch. The total hanging length of 10.25 m is actually hung in 10.10 m, the little difference here is caused by a bar looseness given in the Babylon section. Hanging is directly done in framing lines, except in the foot rope where bolch line is used.

The horizontal meshes at the end of wings are not hung but are laced together with the leg. The upper or lower and side hanging ropes are tied at the end of wing to form the leg.

Rectangular Midwater Trawl

A notable difference in the design of rectangular trawl is that the lower panel is little longer than the upper panel and therefore the side panel wings are asymetrical. Scharfe (1964) notes that the rectangular shape was chosen because it was difficult to open sufficiently in vertical direction a net with equal panels. This forward extension of bottom panel is meant to give the net a downward sheering tendency to secure good bottom contact, if desired. The performance of rectangular net was found better when the outstretch of the bottom panel was increased.

Rigging

A stern trawler equipped for bottom trawling can also do midwater trawling. The additional equipments for midwater trawling are midwater trawl, otter doors and trawl sonde. The extra expenditure to convert a stern trawler for midwater trawling is given in Table 1. The trawl sonde is essential to observe the action and performance of the gear as well as the behaviour and distribution of fish around the net opening. Till recently the trawl sondes available were suitable for operation from larger vessels only. But recently a mini trawl sonde suitable for medium vessels has also become available. However, the operation of transducer on headline is inconvenient especially in rough weather and the trawl sonde is expensive. Therefore, by using Echosounder of the ship and a chart prepared from the warp angle measured by a spirit level reading on a protractor (Figure 5), the position of shoal and the depth of trawl in operation can approximately be known.

The depth of trawl is calculated trignometrically Sin equals opposite side by hypotenuse. If the warp released is 75 fathom from sea surface and the angle measured is 15°, then the depth of trawl will be (Figure 6).

$$\text{Sin } 15^\circ = \frac{BC}{AB}$$

$$\text{Sin } 15^\circ = 0.2586$$

$$BC \text{ (depth of trawl)} = 0.2586 \times 75$$

$$= 19.5 \text{ fathom}$$

The depth of fishing gear calculated thus is presented in Table 2.

Two types of otter doors are used for one boat midwater trawling the suberkrub doors and 4 door midwater boards. The rectangular midwater trawl is rigged with suberkrub otter boards and square (quadratic) trawl is assembled with four door midwater boards. In the 4–door type, the two top boards are smaller lighter than the two bottom boards. On the top edge of the top board a polyform float is attached to increase the buoyancy and stability. From a 200 HP. boat a 6 x 6 fathom midwater trawl can be rigged with a pair of 90 x 53 cm upper door (18 kg. each) and a pair of 170 x 90 cm lower door (128 kg. each). The rigging details are shown in figure 7.

Unlike bottom trawls, midwater trawls are opened downward because of the weight attached between leg and bridle. Since the pulling force of the gear act on head line, static buoyancy cannot contribute much

to the vertical opening of trawl. So the floats attached to head line are to keep the net clear during shooting and hauling. Since the meshes in the front part of midwater trawls are big, there are chances to foul the webbing with floats and so floats are arranged in dense pack covered with small netting and attached to head line.

References

Scharfe, J (1964) One boat mid-water trawling from Germany. *Modern Fishing Gear* of the World II. Fishing News (Books) Ltd., London: 221 – 223.

Varghese, C. P. (1975) A note on one boat midwater trawling experiments conducted on the SSW coast of India. *Sea Food Export Journal* 7 (4): 25 – 28.

Table 1 Additional Expenditure to Introduce midwater Trawling from A 200 HP stern trawler

Sl. No.	Gear	Expenditure
1.	6 x 6 Fathom midwater trawl	Rs. 13,500/-
2.	4 door type mid-water board (170 x 90 cm. Wt. 128 kg) 90 x 53 cm. Wt. 18 kg.)	Rs. 3,550/-
3.	Warp angle measuring instrument	Rs. 400/-
	Total	Rs. 17,450/-
4.	Trawl sonde (EM Mini Trawl Eye, customers Simrad, price without duty)	Rs. 24,000/-
	Grand Total	Rs. 41,450/-

(Contd. on Page 14)

INTEGRATED FISHERIES PROJECT

To estimate the depth of fishing gear in midwater trawling—Warp length in fathoms

	50	75	100	125	150	175	200	225	250	275	300
1	0.9	1.3	1.8	2.2	2.6	3.1	3.5	3.9	4.4	4.8	5.3
2	1.8	2.6	3.5	4.4	5.2	6.1	7.0	7.9	8.7	9.6	10.5
3	2.6	3.9	5.2	6.5	7.8	9.2	10.5	11.8	13.1	14.4	15.7
4	3.5	5.2	7.0	8.7	10.5	12.2	14.0	15.7	17.6	19.2	20.9
5	4.4	6.5	8.8	10.9	13.1	15.3	17.1	19.6	21.8	24.0	26.2
6	5.3	7.8	10.5	13.1	15.4	18.3	20.9	23.6	26.1	28.7	31.3
7	6.1	9.1	12.2	15.2	18.3	21.3	24.4	27.4	30.5	33.5	36.6
8	7.0	10.4	13.0	17.4	20.0	24.4	27.8	31.3	34.8	38.3	41.8
9	7.8	11.7	15.6	19.6	23.5	27.4	31.3	35.2	39.1	43.0	46.9
10	8.7	13.0	17.4	21.7	26.0	30.4	34.7	39.1	43.4	47.7	52.1
11	9.6	14.3	19.1	23.9	28.0	33.4	38.2	42.9	47.7	52.5	57.2
12	10.4	15.6	20.8	26.0	31.2	36.1	41.6	46.8	52.0	57.2	62.4
13	11.3	16.9	22.6	28.1	33.8	39.4	45.0	50.6	56.3	61.9	67.5
14	12.6	18.1	24.2	30.2	36.3	42.3	48.4	54.4	60.5	66.5	72.6
15	13.0	19.4	25.9	32.4	38.8	45.3	51.8	58.2	64.7	71.2	77.6
16	13.8	20.7	27.6	34.4	41.4	48.2	55.1	62.0	68.9	75.8	82.7
17	14.6	21.9	29.2	36.6	43.9	51.2	58.5	65.8	73.1	80.4	87.7
18	15.5	23.2	30.9	38.6	46.4	54.1	61.8	69.6	77.2	85.0	92.7
19	16.4	24.4	32.6	40.7	48.8	57.0	65.1	73.4	81.4	89.5	97.7
20	17.1	25.6	34.2	42.8	51.3	59.9	68.4	77.0	85.5	94.1	102.6
21	17.9	26.8	35.8	44.8	52.8	62.7	71.7	80.6	89.6	98.6	107.5
22	18.8	28.1	37.5	46.8	56.2	65.6	74.9	84.3	93.7	103.0	112.4
23	19.6	29.3	39.1	48.8	58.0	68.4	78.1	87.9	97.7	107.4	117.2
24	20.4	30.5	40.7	50.8	61.0	71.2	81.3	91.5	101.7	111.8	122.0
25	21.2	31.7	42.3	52.8	63.4	74.0	84.5	95.1	105.7	116.2	126.8
26	21.9	32.0	43.8	54.8	65.8	76.7	87.7	98.6	109.6	120.6	131.5
27	22.6	33.9	45.1	56.4	67.7	79.0	90.3	101.6	113.9	121.1	135.4
28	23.5	35.2	47.0	58.7	70.5	82.2	93.9	105.6	117.4	129.1	140.9
29	24.3	36.4	48.6	60.6	72.4	84.8	97.0	109.1	121.2	133.3	145.4
30	25.0	37.5	50 0	62.5	75.0	87.5	100.0	112.5	125.0	137.5	150.0

Direction to use

Place the Angle measuring instrument on the warp and note the degree. Reading the warp angle and length of warp the depth of gear can be found out. For example if the warp angle is 15 degree and warp length from sea surface is 175 fathom, the gear depth will be 45.3 fathoms.

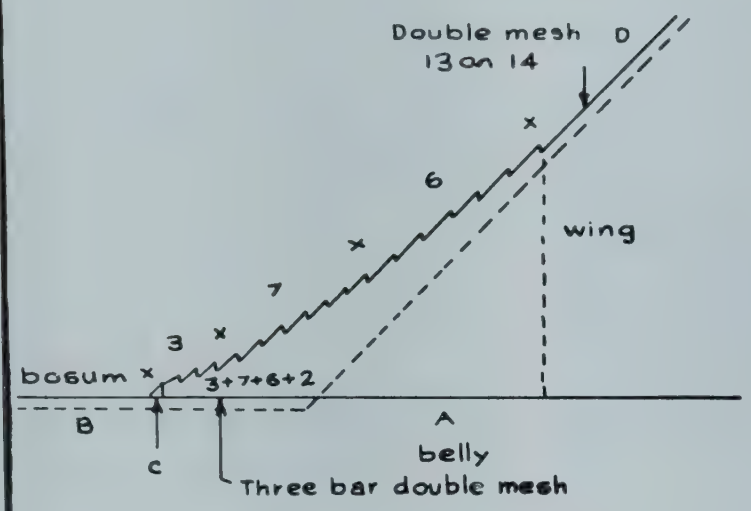


FIG.1. CATENARY WHEN BABY LON IS CONSTRUCTED

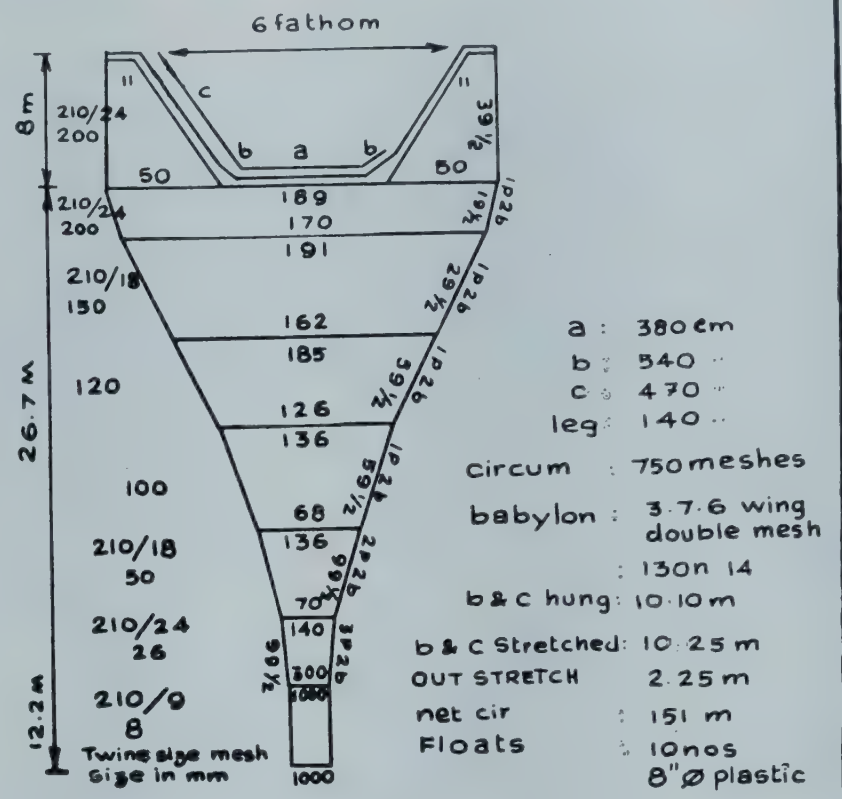


FIG.2. 6×6F QUADRATIC MID. WATER TRAWL

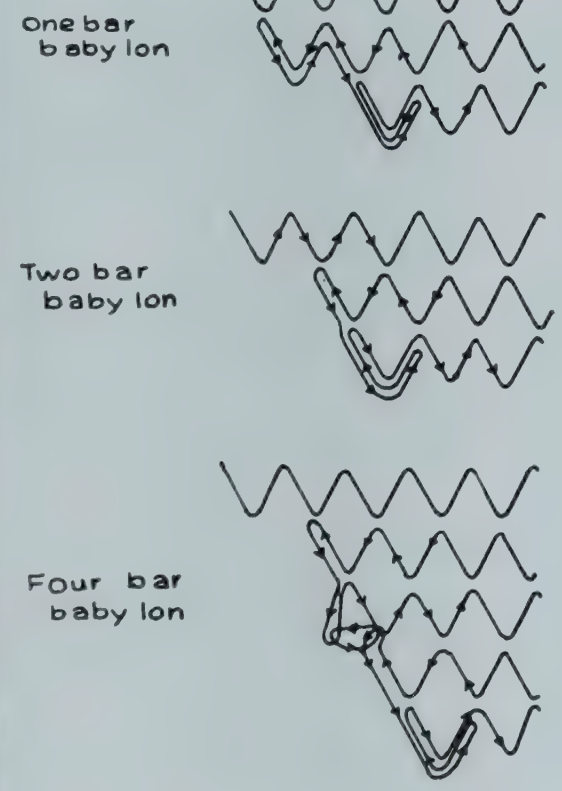


FIG.3. CONSTRUCTION OF BABYLON

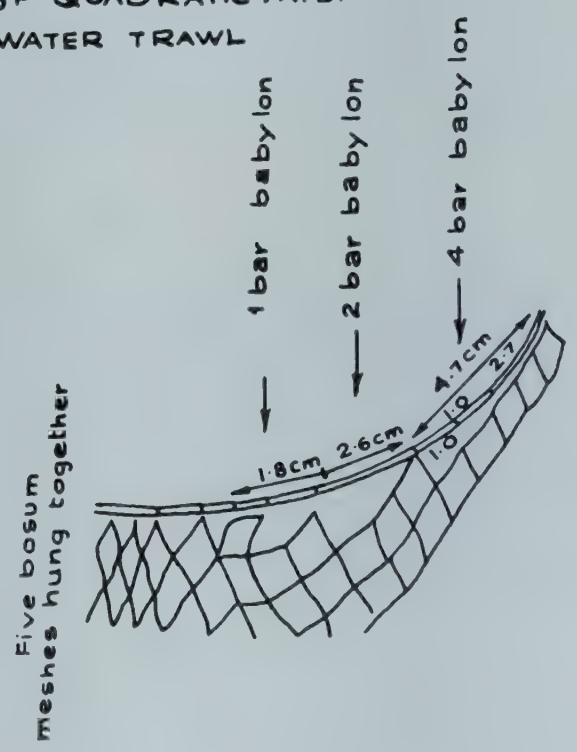


FIG.4. BABYLON BANGING FOR 6×6F MIDWATER TRAWL

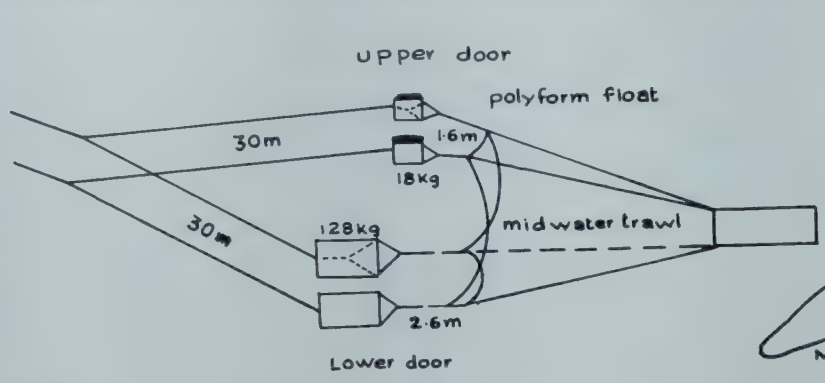


FIG.7. RIGGING OF SINGLE BOAT MIDWATER TRAWL

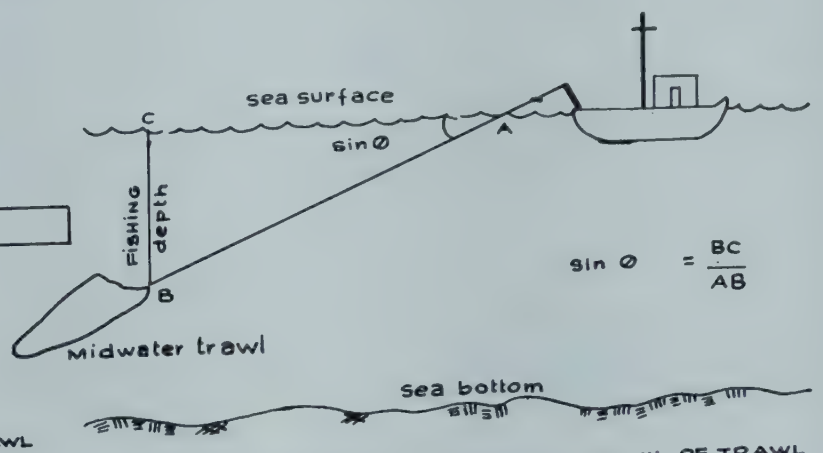


FIG.6. CALCULATION OF FISHING DEPTH OF TRAWL

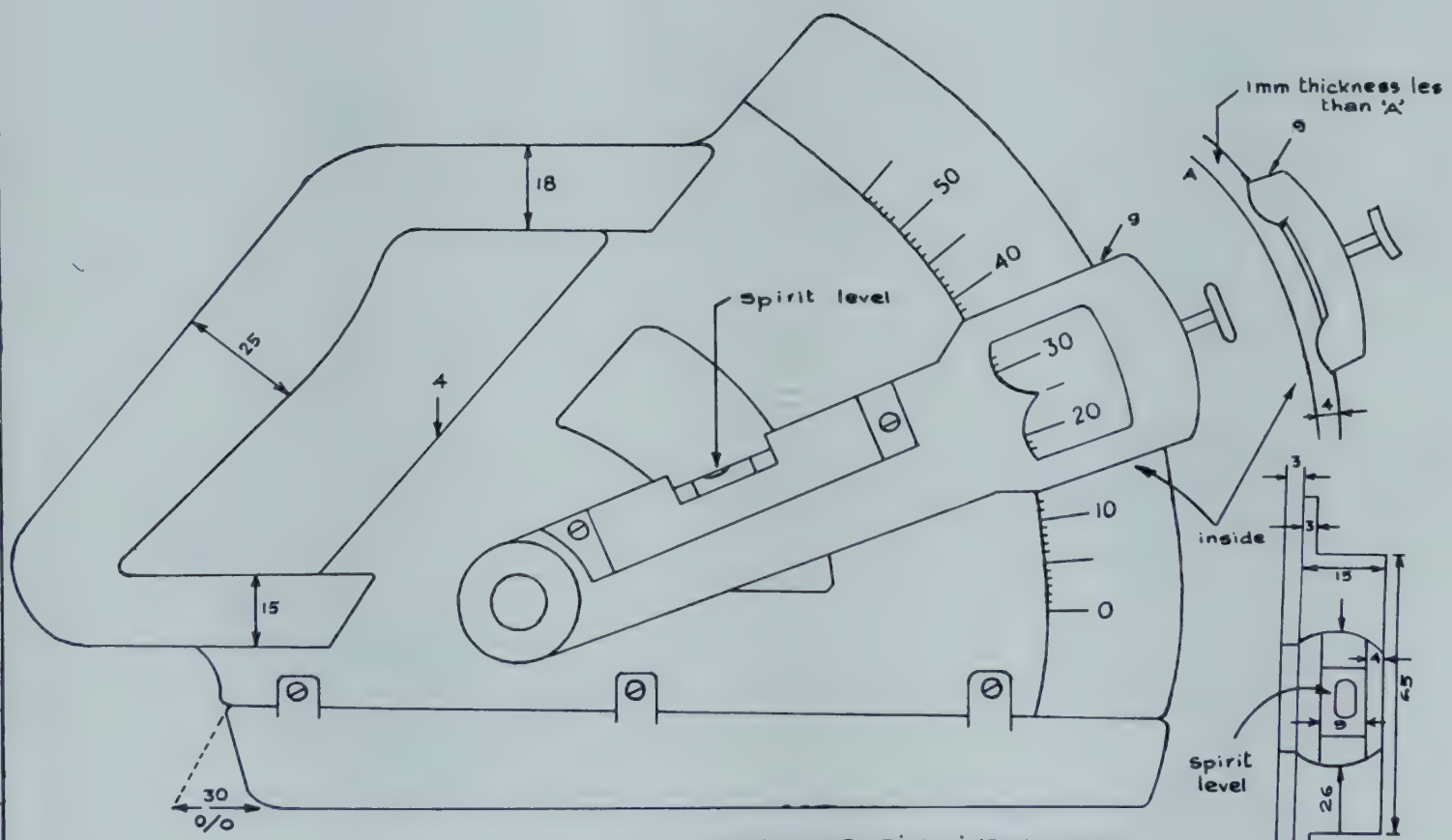


FIG. 5. WARP ANGLE MEASURING INSTRUMENT
(all measurements are in mm)

COMMERCE SECRETARY'S VISIT TO COCHIN

Dr. P. C. Alexander, Secretary to the Ministry of Commerce, Government of India, discussed problems of various export commodities with Chairmen and representatives of export promotion bodies and the trade at a meeting on the 20th of July, 1977 during his maiden visit to Cochin after assuming office as the Commerce Secretary. The problems of the marine products industry were presented before the Commerce Secretary by Mr. S. G. Sundaram, Chairman of the MPEDA, Mr. Salay Mohamed Ebrahim Sait, President of the Seafood Exporters' Association of India, Mr. C. Cherian [M/s. Chemmeens (Regd.), Cochin], Mr. S. R. Banerjee (Associated International Corporation, Calcutta), Mr. N. J. Chacko (Kerala Food Packers, Alleppey) and Dr. K. A. Savagaon (Britannia Seafoods, Bombay).

During the discussions, it was pointed out that there should be some control on regulations for registration, particularly for newcomer exporters. As for improvement of landing facilities for fishing boats, the MPEDA has proposed to take certain effective measures for providing the necessary facilities on priority basis in the important fish landing centres. The need for early clearance of the Government to the Authority's proposal for supply of duty-free diesel oil to fishing vessels was also brought to the notice of the Commerce Secretary.

Hearty welcome. Commerce Secretary, Dr. Alexander being received by Mr. S. G. Sundaram, Chairman, MPEDA

Mr. S. G. Sundaram, Chairman of the Authority presented before the Commerce Secretary, the problems of the marine products industry. Sitting to his left are Mr. K. Chidambaram, Director, MPEDA, Mr. T. M. Joseph (M/s. George Maijo), Mr. C. Cherian (M/s. Chemmeens Regd.) and Mr. Salay Mohamed Ebrahim Sait (President, Seafood Exporters' Association of India).

Commerce Secretary, Dr. Alexander Addressing the Meeting.

Among the important steps taken by the MPEDA for increasing the unit value realisation of Indian marine products the following points were particularly highlighted:

(a) publication of the "PRIME" a weekly price indicator for marine products, since March 1977;

(b) arrangements made with the Indian Embassies in Japan and U.S.A. for transmitting, regularly to the MPEDA latest market intelligence and trade information;

(c) Chairman's recent visit to Tokyo and discussions with the Japan Marine Products Importers' Association, when the latter assured to give higher prices for Indian frozen shrimp, provided quality and schedule of supply are strictly adhered to.

The Authority is formulating an ambitious scheme for educating the various sectors of the industry on the need for maintaining proper quality, health and hygienic standards at all stages from catch to processing through packing and export. This will be helpful in improving the image of India as the largest supplier of high quality marine products.

The spokesmen of the seafood trade impressed on the Commerce Secretary on the urgent need for remedial measures for various problems currently faced by the seafood export trade and industry.

The Commerce Secretary assured that all possible help and support will be extended for the development of the seafood industry on healthy lines. Necessary action will also be initiated in redressing the genuine difficulties experienced by the exporters.

Mr. A. K. Antony, Chief Minister of Kerala, inaugurated the 5th Session of the Indian Ocean Fishery Commission at Cochin on 19th October, 1977

THE FIFTH SESSION OF THE IOFC

The fifth session of the Indian Ocean Fishery Commission was hosted by the Government of India, at Cochin from 19th to 26th of October, 1977.

The Indian Ocean Fishery Commission is a programme recommending body for development of Fisheries in the Indian Ocean region set up in 1969 under the Food and Agriculture Organisation of the United Nation.

Dr. H. Watzinger, Asst. Director General (Fisheries) of the FAO, had a meeting with seafood exporters at the MPEDA Office. Seated from right to left are: Chairman Sundaram, Dr. Watzinger, Mr. C. Cherian, President, Seafood Exporters' Association of India and Mr. P. K. Eapen, Chairman & Managing Director of Kerala Fisheries Corporation.

A technical session in progress at the CIFT auditorium. Mr. N. Odero, Chairman of the Commission is sitting 3rd from right.

Delegates at the Seafood banquet hosted by the MPEDA

Assessment of the available fish resources in the Indian Ocean, identification of the problems of fisheries research and development and organising through funding agencies support for the research and development activities of the member countries for increased exploitation of fish resources, their efficient utilisation, management and conservation etc. are the major functions of the Commission.

Mr. A. K. Antony, Chief Minister of Kerala, the leading maritime State of India, inaugurated the Session on 19th October, 1977. Mr. G. V. K. Rao, Secretary to the Union Ministry of Agriculture and Irrigation presided over the inaugural session.

Mr. N. Odero, Director of Fisheries, Kenya and Chairman of the Commission released on the occasion, a commemoration volume entitled 'Indian Fisheries 1947–77', the production of which was financed fully by the MPEDA.

The business sessions were held at the auditorium of the Central Institute of Fisheries Technology (C. I. F. T.).

Prof. P.C. George, Joint Commissioner (Fisheries), Ministry of Agriculture and Irrigation, Government of India, led the Indian delegation to the IOFC Session. Dr.

Inaugural function of the Silver Jubilee Celebrations of the IFP. Mr. V. G. K. Rao (left), Secretary, Ministry of Agriculture and Irrigation, Inaugurated the Celebrations. Mrs. S. L. Singla, Joint Secretary (Fisheries), presided over the function. Prof. P. C. George, Joint Commissioner (Fisheries) and the newly elected Chairman of the IOFC is at extreme right.

Distinguished guests at the MPEDA Pavilion in the Open House and Fisheries Fair organised by the IFP.

T. A. Mammen, Director of the MPEDA was one of the members of the Indian Delegation which also included the Directors of all the Fishery Institutes under the Fisheries Division of the Ministry of Agriculture and the President of the Seafood Exporters' Association, Mr. C. Cherian.

About 80 delegates participated in the session, representing 33 member-countries of the IOFC and other international organizations member-nations of the F. A. O., non-member nations which are members of the United Nations and international funding institutions.

Dr. H. Watzinger, Assistant Director General (Fisheries) of the FAO attended the IOFC session as the State Guest of the Government of India and visited various fishing centres, processing plants etc. in different parts of the country. He met the seafood exporters at a meeting organised in the conference room of the MPEDA. His visits and discussions at Bombay and Madras were co-ordinated by the Regional Offices of the MPEDA.

The eight-day session came to a close on the 26th October after reviewing the status of different fish stocks and their management, co-operation and collaboration in Fishery Research and survey activities, fishery development possibilities, progress of the Indian Ocean fishery survey and development programmes, besides identifying new areas of assistance.

Banquets were hosted every day in honour of the delegates at which specially selected Indian Seafood delicacies were served. The MPEDA hosted a dinner on 21st October, 1977.

Prof. P. C. George, leader of the Indian Delegation, has been elected as the Chairman of the forthcoming 6th Session of the Indian Ocean Fishery Commission to be held at Perth, Australia in 1979.

Mr. Ousep D. Attokaren (left), Secretary, MPEDA, guiding the distinguished visitors at the MPEDA Pavilion.

An outside view of the MPEDA Pavilion.

The Integrated Fisheries Project (I. F. P.) which was celebrating its Silver Jubilee, organised an 'Open House and Fisheries Fair' at Cochin which synchronised with the IOFC Session. Mr. V.G.K. Rao, Secretary to the Ministry of Agriculture & Irrigation inaugurated the Silver Jubilee celebrations at a meeting in the IFP premises, which was presided over by Mrs. S.L. Singla, Joint Secretary (Fisheries), Ministry of Agriculture and Irrigation, Government of India.

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TRADE FAIRS AND EXHIBITIONS

I. Sial Fair, Paris

The MPEDA participated in the Sial Fair (International Food Products Exhibition) which was held at Paris, from 15th to 20th Nov. 1976. This was the biggest Food Fair 1976. Mr. Ousep D. Attokaren, Secretary, MPEDA, represented the Authority as the Director of the India Pavilion. 12 exporters from India attended the Fair. The 60 sq. m. stand of ours was divided into

a) the exhibition area,
b) an office room,
c) a store room/kitchen and
d) a meeting room.

The CEPC and The Cardamom Board were each assigned a portion of the stand for exhibiting their products.

Our stand was visited by over 8,000 persons and a large no. of trade enquiries was received. In addition, the individual exporters were enabled to meet importers on their own, as well as competitors and to book orders directly. They also had the opportunity to study the various types of products that would move in the market and the type of processing/packaging required. Mementoes were also presented to buyers and important visitors.

Mr. Christian Bennet (left), French Minister for Agriculture who inaugurated the Sial Fair, Paris, visited the India Pavilion. Mr. Ousep D. Attokaren, Secretary of the MPEDA who was also the Director of the India Pavilion presenting gifts to the Honourable Guest.

Visitors evincing keen interest in the Indian Frozen Seafood exhibits at the Food Products Fair, Tokyo (March-1977)

MPEDA Pavilion in the Fourth International Frozen Food Industry Exhibition, Tokyo. Mr. V. Ramalingam, Deputy Director of MPEDA and Director of the Pavilion and Mr. A. R. M. Kassim of M s Universal Trades Corporation, Cochin (Extreme right) are also in the picture.

II. Fourth International Frozen food Industry Exhibition in Japan

The exhibition was organised at International Trade Centre, Harumi, Tokyo for 5 days from 15th to 19th June 1976, by Japan Food and Management Association. This is the only recognised international exhibition of frozen foods in Japan.

Mr. Eric Gonsalves (second from right) Indian Ambassador to Japan, at the MPEDA Pavilion in the Fourth International Frozen Food Industry Exhibition, Tokyo.

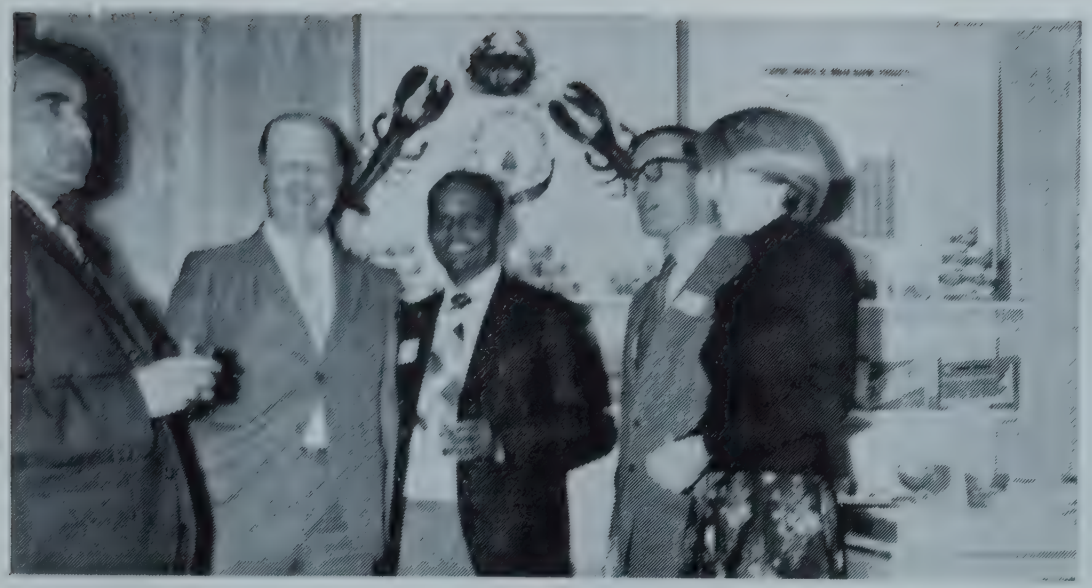
The MPEDA booth was ideally located at the central point very close to the main entrance. Japanese visitors of our stall included big trading companies, small trading companies, wholesalers and reprocessors and also retailers and ultimate consumers. During the exhibition as many as 40 trade enquiries were received.

Food & Domestic Equipment Trades Fair — Brussels, Belgium.

Though essentially a consumer fair, the Food and Domestic Equipment Trades Fair, Brussels, was found to have immense potentialities from the trade point of view. Most of the visitors who came to the fair were by and large consumers and we could not have had a better forum anywhere in Europe for propogating our products. It is at this fair that products seeking entry into Europe especially to Belgium, are put to consumer tests.

The MPEDA participated in the fair which was held from 2nd to 17th October 1976. The 90 Sq.m. India Pavilion was shared by the MPEDA and Tea Board. The MPEDA Pavilion was known as the India Pavilion. The distribution of literature relating to marine products proved to be a tremendous success as many came forward to make on the spot purchases. For the visitors from the Marine Products Trade, we had samples of frozen shrimp, frozen cuttlefish, frozen froglegs and all varieties of canned seafoods. After physical observation of the samples, they gave specific trade enquiries.

The 8th October was celebrated as "India Day" which attracted a large attendance including officials of the EEC and Government of Belgium and representatives of the seafood trade. Indian seafoods, cashew and snacks were distributed at the cocktails. The "India Day" celebrations, acclaimed as the best



The MPEDA Stand in the India Pavilion at the LONDON IMPO EXPO Seminar cum-Trade Exposition. Dr. M. Sakthivel, Deputy Director, MPEDA, who represented the Authority is at the centre.

function in the whole fair, also helped in gaining publicity to our products.

London Impo-Expo

The MPEDA participated in the London Impo Expo Exhibition held from 12th to 15th October, 1976 India stand was the largest with 90 sq. mts. representing marine products and other export items. The marine products received greater attraction among the items displayed and obtained many a trade enquiry. Plastic models of lobsters and crabs were displayed which caught the eyes of many a visitor. At the end, canned and frozen samples of our marine products were presented to potential importers and high officials. Dr. M. Sakthivel, Deputy Director, represented the MPEDA at the Exhibition.

At the MPEDA Stand in the BUYER-SELLER MEETS, U. S. A.

Buyer Seller Meets at New York & Los Angeles

The MPEDA participated in the Buyer-Seller Meets, organised by the Trade Development Authority at New York and Los Angeles from October 5th to 15th, 1976, and 24th to 29th, 1976, respectively. The Buyer Seller Meets are intended to provide opportunities for exporters and importers to meet each other and negotiate and settle business dealings.

In New York the Marine Products Export Development Authority was allotted two booths measuring 12 feet wide, 25 feet deep with 8 feet high backdrop railings and 3½ ft side railing. Frozen froglegs, frozen shrimps, other frozen sea foods and canned items were on display. Numerous trade enquirers were received. Thousands of people visited the MPEDA stall.

The stall allotted to MPEDA and other arrangements at MPEDA stall in Los Angeles, were similar to the ones in New York. Numerous trade enquireris were received there also.

IKOFA '76

This was the first time that the MPEDA participated in the IKOFA international trade fair. The fair was organised in the permanent trade fair grounds in a panoramic site in Munich. The duration of the fair was 1 week from 16th to 22nd September 1976. The Indian Stall occupied an area of about 80 sq. Mts. Marine Products, Processed Foods, Cashew, Cardamom and Pepper were the items displayed in the stall. MPEDA occupied a predominant position being the co-ordinator of all these commodity groups.

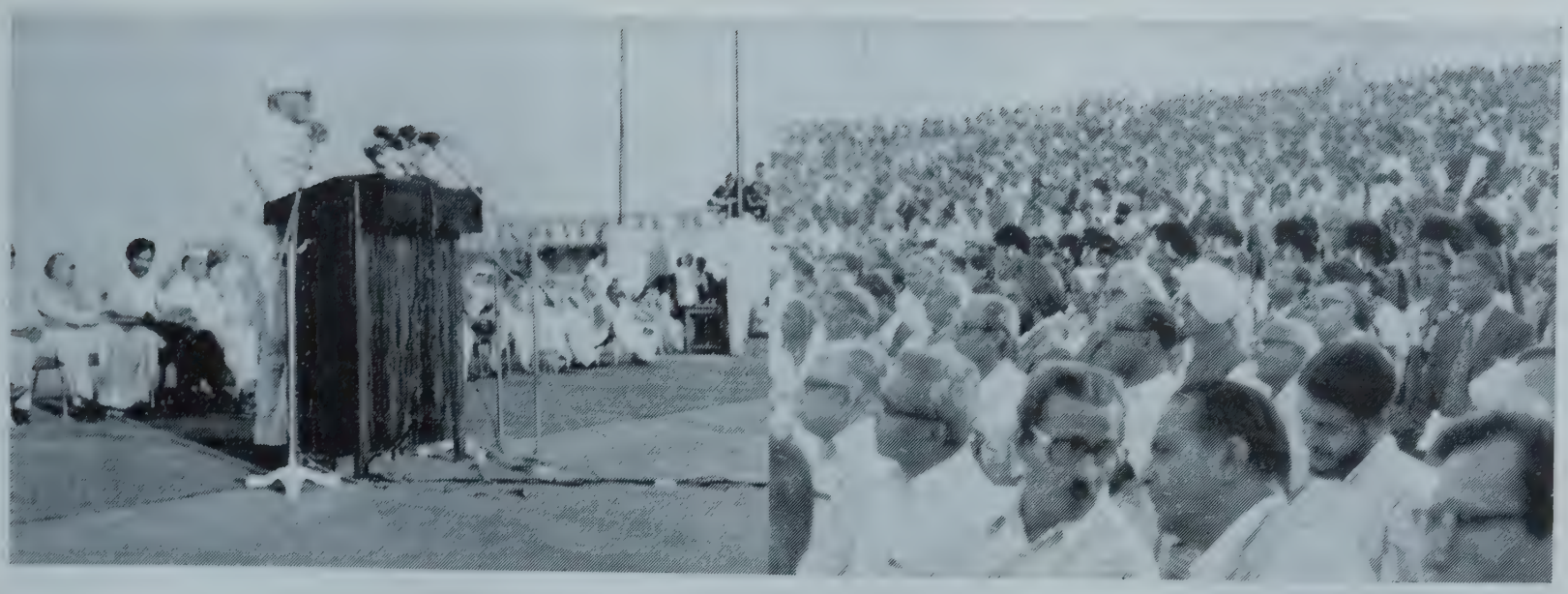
Mr. Joseph Erti, Minister for Agriculture, Federal Republic of Germany, at the MPEDA Pavilion in the IKOFA '76 International Trade Fair, Munich. Mr. V.C. Khanna, Consul General of India, Frankfurt, is to his left. Mrs. Edalji, Marketing Officer of the Indian Consulate General is also seen in the picture.

Mr. Joseph Erti, tasting Indian Food delicacies in the MPEDA Pavilion. Dr. K. P. P. Nambiar, Deputy Director, MFEDA, who was the Director of India Pavilion in the IKOFA FAIR '76, is at the extreme left.

More than 80 trade enquiries were received. It should be mentioned that very encouraging enquiries were received for canned sardines and canned tuna and canned shrimp. As for canned sardines, almost all visitors who tested this item at our stall were satisfied with the quality of the product and were willing to buy considerable quantities from India provided prices were competitive and labelling was done as per local requirement. Much publicity was given to our products through discussion, press interviews and audio visual media in West Germany. Dr. K. P. P. Nambiar, Deputy Director, MPEDA, represented the authority.

Participation in Roka 78

The MPEDA is directly participating in the forthcoming 'Roka 78'. International Food Exhibition to be held at Utrecht (Netherlands) from 13th to 17th of February, 1978. The MPEDA as well as four seafood exporters sponsored by the Authority for participation in this Exhibition are availing of financial assistance from the Dutch Government Centre for Promotion of Imports from Developing Countries (CBI). Marine products will be displayed in the India Pavilion having a floor area of 100 Sq. Metres where separate stands will be set up for the MPEDA as well as the exporters. The exhibits at the MPEDA stand will consist of Frozen exhibits like Shrimp, Lobster tails, Cuttle Fish/Squids, Perch (Rock Cod and Snapper), Eel and Canned exhibits like Shrimp, Tuna, Sardine, Mackerel, Crab meat etc. The India Pavilion will be housed in the Bernhardhal in the Utrecht Fair complex.



Prime Minister Mr. Morarji Desai inaugurated the "AGRI EXPO 77" at New Delhi on 13th November, 1977

AGRI EXPO '77

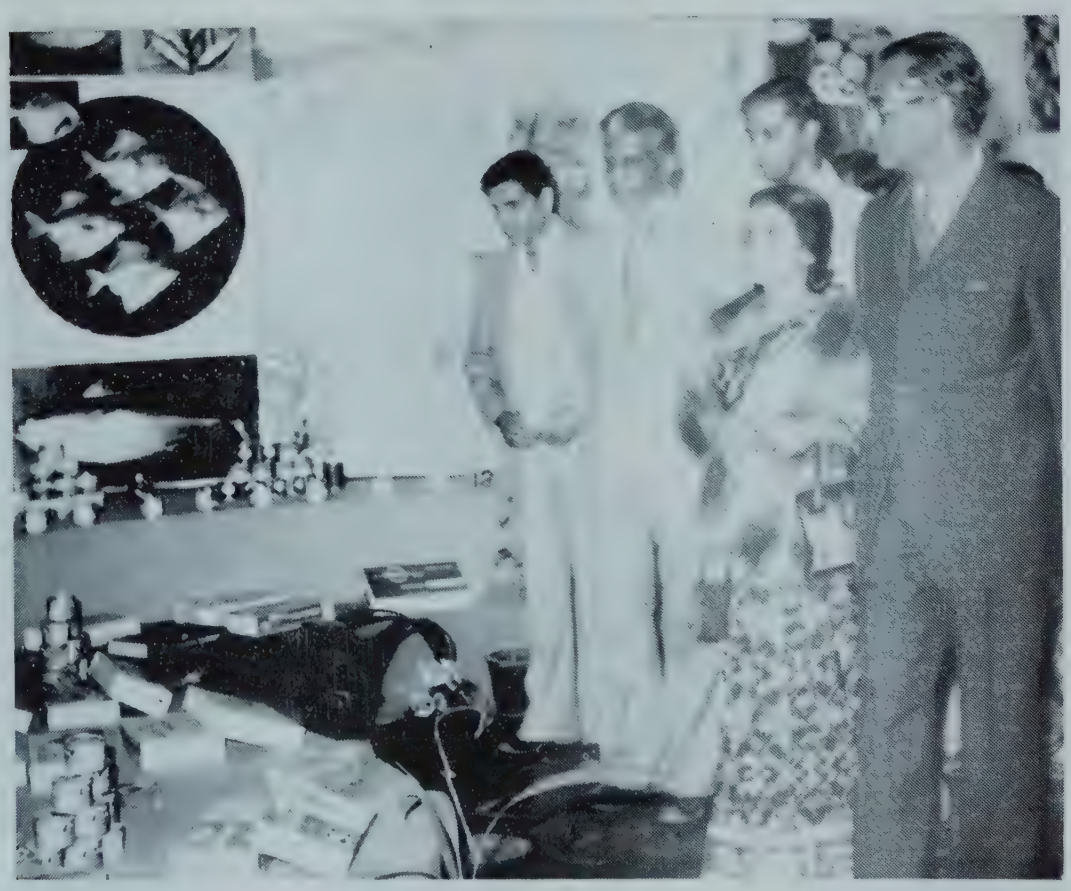
Indian Agricultural Exposition or what is popularly known as AGRI EXPO '77, the biggest-ever National Fair in India was held at Pragati Maidan, New Delhi, from November 13 to December 14, 1977. The Exhibition was organised by the Trade Fair Authority of India on behalf of the Government of India.

The main objective of the Fair was to disseminate information on India's progress in the fields of agriculture and allied sectors in the post-Independence period and to explore avenues for development of co-operation in these fields with the participation of foreign countries.

The Fair was in essence an exposition of the Government's faith on the development of the agricultural and rural sectors. Agriculture in India is not merely an economic activity, but like Democracy, a way of life for the vast majority of the people.

Mr. Mohan Dharia, Minister of Commerce, Civil Supplies and Co-operation visited the MPEDA stand in the composite pavilion of the Commerce Ministry

Mr. Arif Baig, Union Minister of State for Commerce being shown round the MPEDA stand in Agri-Expo '77.



Dr. P. C. Alexander (extreme right), Commerce Secretary, at the MPEDA stand.

The great resurgence which is taking place in the entire community life, the newly awakened aspirations which are changing economic activity and living conditions and the upsurge for growth all over the rural scene were all reflected in the Fair.

The Fair was inaugurated by India's Prime Minister Mr. Morarji Desai at a colourful function in the Pragati Maidan, New Delhi, on November 13, 1977. The Union Minister of Commerce, Mr. Mohan Dharia welcomed the distinguished gathering.

Mr. Ibrahim Saheb, Maldives Minister for Agriculture at the MPEDA stand. He is flanked by Mr. R. R. Singh (left) Under Secretary, Ministry of Commerce and Mr. S. G Sundaram (right) Chairman, MPEDA. Also seen in the picture is Mr. J. Sanyal (second from extreme right), Deputy Secretary, Ministry of Commerce.

Various Ministries of the Government of India as well as the State Governments, a large number of private and public sector organisations and some foreign countries had set up their own pavilions. The Union Ministry of Agriculture and Irrigation had the largest pavilion, which was also the theme pavilion and was designed by the National Institute of Designs, Ahmedabad.

India's export commodities were displayed mainly in the 1000–square metre composite pavilion of the Ministry of Commerce, where all the export promotion organisations functioning under the administrative control of the Commerce Ministry had put up their own display stands. The Marine Products Export Development Authority displayed the various items of India's marine products in a 100 square metre floor area in the composite pavilion. The display highlighted the role of the MPEDA in the development of seafood industry in India. Photographic enlargements, models of crafts and gear, charts depicting production and export growth, particularly India's emergence as the world's biggest producer of shrimp etc. were displayed in the MPEDA stand. Samples of frozen marine products were displayed in a deep-freeze display cabinet, specially installed at the stand. The acquarium at the MPEDA stand was a point of focal attraction.

The composite pavilion of the Commerce Ministry was awarded the Second Prize for excellence in presentation.

The Fair is estimated to have been visited by over 15 lakhs of people during the one-month period.

A view of the display at the MPEDA stand. The MPEDA was awarded a Silver Medal (Second Prize) for excellence of presentation.

AGRIEXPO 77

प्रगति मैदान नई दिल्ली में नवम्बर 13 से दिसम्बर 13, 1977 तक आयोजित राष्ट्रीय कृषि प्रदर्शनी में द्वितीय निर्णीत लोक उपक्रम/वस्तुबोर्ड/निर्यात संवर्धन संगठन के मंडप/स्टाल के लिए
रजत पदक से पुरस्कृत

For the Second adjudged Public Undertaking/ Commodity Board /Export Promotion Organisation Pavilion/Stall in the National Agricultural Exposition, held at Pragati Maidan, New Delhi - November 13-December 13, 1977.

Given this Award of Silver Medal

विजेता
To *Marine Products Export Development Authority*

अध्यक्ष
भारतीय व्यापार मेला प्राधिकरण
Chairman
Trade Fair Authority of India

अध्यक्ष
निर्णायक मंडल
Chairman of
Jury

A Replica of the Silver Medal awarded to MPEDA.

Another view of the display at the MPEDA stand. ⟶

STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS ABOUT THE NEWSPAPER 'INDIAN SEAFOODS'

(to be published in the first issue every year after the last day of February)

FORM IV

(See Rule 8)

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I, Ousep D. Attokaren, hereby declare that the particulars given above are true to the best of my knowledge and belief.

Cochin - 682 016
Date: 31—12—1977.

(Sd.) OUSEP D. ATTOKAREN
Publisher

PROFILES

Mr. S. G. SUNDARAM, I. A. S.

Mr. S. G. Sundaram, I.A.S., took over as Chairman of the Marine Products Export Development Authority on February 16, 1977, in addition to his responsibilities as the Chairman of the Cardamom Board. Thirtynine-year old Mr. Sundaram hails from Ambasamudram in Tamilnadu.

He had a distinguished academic career taking B. Com. (Hons.) from Madras University and M.A. in Development Economics from Williams College, Massachusetts, USA. He appeared for the Intermediate Chartered Accountancy in Madras and secured the all India first prize.

He entered the Indian Revenue Service in 1960 and joined the Indian Administrative Service in 1962. He had held important assignments under the Government of Haryana, as Managing Director of the Haryana State Industrial Development Corporation Ltd; Managing Director of the Haryana Breweries Ltd., Director of Industrial Training and Employment, and Joint Secretary (Finance) to the Government of Haryana. He was representing the Government of Haryana as Director on the Boards of 17 companies. He had also worked in the Union Ministry of Agriculture & Irrigation, New Delhi.

Mr. Sundaram is one of the most zealous advocates of "professional management" and is very keenly interested in Management Studies.

Mr. R. D. PUSALKAR

Mr. R. D. Pusalkar, a post graduate in Sociology, started his career as a Senior Executive in the Reserve Bank of India. After retirement from the Central Government service, Mr. Pusalkar joined M/s. Greaves Cotton Co. Ltd., as Resident Director. He took over as the Chairman and Managing Director of M/s. New India Fisheries Ltd., when the management of which was entrusted to M/s. Greaves Cotton Co. Ltd., about 4 years ago by the financing institutions to steer the Company out of crisis. Mr. Pusalkar successfully accomplished the challenging assignment. Meanwhile he also acquired a thorough knowledge of all aspects of the seafood industry like deep-sea fishing, production and international marketing.

Mr. Pusalkar was appointed by the Government of India as a member of the MPEDA in December, 1975 and was elected as the Vice-Chairman of the Authority in May, 1977. He is also the Director of the Unit Trust of India, M/s. Ruston & Hornby (makers of Marine Diesel Engines), Blue Diamond Hotel, and President of the Maharashtra Chamber of Commerce, Pune.

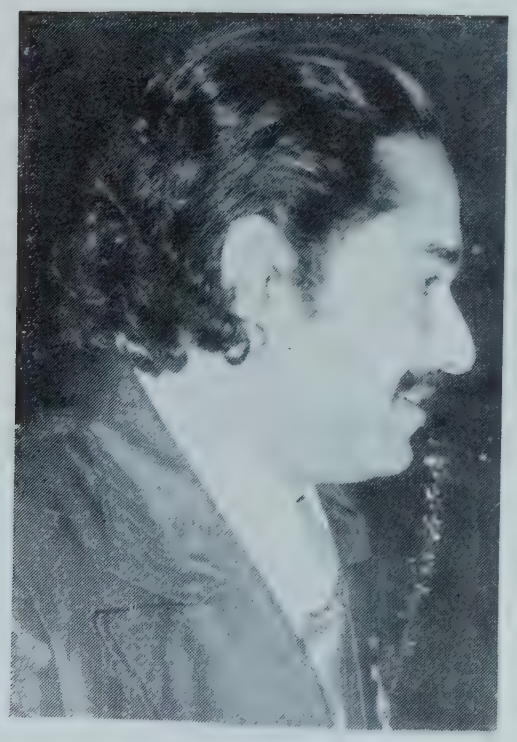
Dr. T. A. MAMMEN

Dr. T. A. Mammen, took over as Director of the MPEDA. on the 15th October, 1977. Until recently he was Deputy Commissioner (Fisheries) in the Union Ministry of Agriculture and Irrigation, New Delhi.

Dr. Mammen, who is in his early fifties, had an exceptionally brilliant academic record and was the first to be conferred a Doctorate in Marine Biology by the University of Kerala. He started his career as a Research Officer in the Department of Marine Biology in the Kerala University, later joined the Central Marine Fisheries Research Institute. He has the unique distinction of being the first fishery scientist to win an Award from the Invention Promotion Council.

Dr. Mammen joined the Union Ministry of Agriculture in 1964 and has been the Deputy Commissioner (Fisheries Planning) since 1973. He has had the opportunity of being closely associated with the activities of the State Governments, Union Territories and Central Institutes. He had under his charge, works relating to fishing harbours, refrigeration, domestic fish marketing, compilation of statistics and intelligence, fishery extension etc.

Dr. Mammen brings with him a wealth of experience in the Marine Products Industry, experience that will be of immense benefit to processors and exporters. He has travelled extensively in India and abroad.



Mr. C. CHERIAN

Mr. C. Cherian, one of the leaders of the Indian seafood export trade, was unanimously elected as the President of the Seafood Exporters' Association of India, at its annual general meeting, held in Cochin recently. He has been closely associated with the development of Seafood Industry in India and was the President of the Association during 1972-73, 1973-74 and 1975-76 also. He has been a member of the MPEDA since its very inception. Mr. Cherian was the Vice-Chairman of the Authority in 1974–75 and is currently a member of the Executive Committee. In addition to his activities in many fields, he is also a member of the Board of Trade of the Government of India, the Export Inspection Council of India and several other important trade promotion bodies. Mr. Cherian represents the Authority as a Trustee of the Cochin Port Trust, the major port, from where more than 50% of India's marine products are shipped.

NEWS & NOTES

Indian Seafoods Exports set New Record

The Indian Marine Products Exports reached an all time high during 1976–77 registering a growth of 22.56% in terms of quantity and 51.87% in terms of value over that of 1975–76.

The exports amounted to 66750 tonnes valued at Rs. 189.12 crores, as against 54463 tonnes valued at Rs. 124.53 crores during 1975-76. Frozen shrimp which accounted for 74% in terms of quantity and 89% in terms of value was the main item that contributed to the growth in exports. The other items which recorded increased exports included frozen froglegs, frozen lobstertails, frozen fish, dried fish and frozen squids.

Trade and Payments Protocol signed between India and GDR

The Indo-GDR Trade and payments Protocol signed on the 11th November 1971 in Berlin was valid only upto 31st December 1977. As a result of the negotiations with the GDR delegation, a new long term Trade and Payments Agreement between the Government of India and the Government of German Democratic Republic has been signed in New Delhi valid for a period of four years ending 31st December, 1980.

CBI (Netherlands) suggests certain procedural formalities

The Centre for Promotion of Imports from Developing Countries (CBI) is an agency of the ministry of foreign affairs of the government of Netherlands, set up to contribute to the prosperity of developing countries by providing information about marketing opportunities for their industrial products in the advanced countries, especially those of Western Europe. According to the CBI, if an exporter has entered into business relations with an importer, agent, distributor or any other counter part in Netherlands it might be in the interest of both parties to come to an exclusive agreement. For this purpose the CBI has suggested the following procedure.

(1) An exporter's counterpart in the Netherlands sends to the CBI a letter in English informing them of the agreement made.

(2) At the same time, the exporter's counterpart will send a copy of his letter to the exporter with the request to confirm the agreement to CBI, with a copy to him.

(3) On receipt of the letter of confirmation from the exporter CBI will remove the exporters' samples and or file from the merchandise trade centre(MTC).

The above procedure has been suggested by the CBI to safeguard the interest of the exporters.

Soon after assuming office, Chairman had meetings with exporters at major seafood exporting centres. The meeting at Madras was attended by Officers from the State and Central Governments also. Picture above shows (from left to right) Mr. R. R. Singh, Under Secretary, Ministry of Commerce, Mr. R. Nagarajan, Director of Fisheries, Tamilnadu, Mr. S. G. Sundaram, Chairman, MPEDA and Mr. K. Chidambaram, Director, MPEDA (since retired). Below: a section of the exporters who attended the meeting.

Indo-Polish Agreement for Fishery Resources survey

India and Poland have agreed on a plan to survey the fishery resources of the North Western coasts of India. The survey will be carried out with the aid of Poland's deep sea fishing enterprises and will cover waters off the States of Maharashtra and Gujarat at depths ranging from 30–200 fathoms.

The survey is expected to provide

valuable information on deep sea fisheries resources in the north west coasts of India.

U. S. Consumers positive towards frozen foods

Consumer attitude towards frozen foods is extremely positive in recent times, according to a survey conducted by the National Frozen Food Association (U. S. A.) who found that frozen products were given the highest ratings in 9 of 13 product attributes by consumers. But the consumers consider frozen foods expensive and are usually served only when they have unexpected guests. Marketing programmes need to stress the high quality received for money spent, concentrating more on the use of frozen foods in the daily life style. The survey also found that merchandising is the weakest spot in the frozen food market.

Norwegian Assistance for Fisheries development in India

Norway is expected to grant NKr. 390 billion during the four years from 1977 to 1980. Norwegian technical assistance relates mainly to projects and programmes in priority development sectors including transfer of sophisticated technology. Among new proposals identified are integrated fisheries projects and commercial fishery surveys on the east coast.

Indo Norwegian Agreement for ship design service

The Ministry of Shipping and Transport has concluded an agreement with Shipping Research Services of Oslo (Norway) on preparing a project report for setting up a Central Marine Design and Research Organisation in India. Shipping Research services will prepare designs for fishing vessels suited to Indian conditions to eliminate dependence on foreign sources for such designs.

Machinery Imports Liberalised

To step up and sustain the quality and quantity of export production by broadening and strengthening the production base, the Government of India has liberalised the import policy of machinery items for expansion of industrial capacities and setting up of new units to ensure modernisation. The procedure of indigenous scrutiny including the clearance from capital goods committee in the matter of importing machinery have been dispensed with.

Karnataka State awards for Seafood Exporters

M/s. Apollo Seafoods and M/s. Sterling Foods, Mangalore were awarded the first and second prizes respectively for outstanding export of marine products from the Karnataka State during the year 1975–76. The Trophies were distributed by the Governor of Karnataka at a formal function held at Bangalore.

Interest subsidy for Modernisation

In order to enable the seafood industry, especially the small and medium scale processors to modernise plant, equipment and factories, the Government of India have accorded approval for a scheme of the Marine Products Export Development Authority for granting a subsidy on the interest on loans taken by the processors of marine products through recognised financial institutions.

Visa for business visits to Bahrein

Information has been received that the Government of Bahrein have issued an order according to which a 72 hrs. visa can be issued at the Bahrein Airport to a bonafide business man. This 72 hr. visa will however, neither be extended nor converted into any other type of visa. The effect of this order is that business men, who used to enter Bahrein on a 72 hr. visa and then could get it converted into a longer term visa earlier, can no longer do the same. Visitors who may have to stay longer than three days in Bahrein should therefore obtain a proper visa from the Consulate of Bahrein in Bombay before proceeding to Bahrein.

Problems of Deep-sea Fishing Development discussed at New Delhi

The Government of India have drawn up a comprehensive programme for development of deep-sea fishing in India with reference to the recent declaration of the 200–mile exclusive economic zone for utilisation of marine resources in the zone for national benefit. The MPEDA convened a meeting of prospective entrepreneurs interested in import of deep-sea fishing vessels and joint venture proposals at New Delhi on 15th July, 1977, to explain the Government's policy on the subject and to consider the strategy for speedy and effective implementation of the project. Representatives of a large number of firms interested in deep-sea fishing ventures attended the meeting.

Mrs. S. L. Singla, Joint Secretary (Fisheries), Ministry of Agriculture & Irrigation presided over the meeting and explained at length the policy of the Government in the matter and also clarified specific questions raised by participants.

Earlier, welcoming the meeting, Mr. S. G. Sundaram, Chairman of the MPEDA, briefly explained the steps already taken by the Ministry of Agriculture in issuing the Public Notice on deep-sea fishing industry, and the circumstances under which the meeting was convened by the MPEDA. Mr K. Chidambaram, Director, MPEDA, Prof. P. C. George, Jt. Commissioner (Fisheries) Ministry of Agriculture, Mr. J. Sanyal, Deputy Secretary, Ministry of Commerce and Mr. R. R. Singh, Under Secretary, Ministry of Commerce also attended the meeting.

Seafood Importers : there is profitable business swimming your way.

Indian Seafoods!

Indian Shrimp—Frozen(fresh frozen, cooked and peeled etc.) or Canned—Frozen Lobster Tails, Frogs legs, Cuttle Fish and Squids, Canned Sardine, Crab meat, and a variety of Frozen and Canned Fish from the clean tropical waters of the Indian Ocean, free from chemical pollutants.

In 1976, Seafoods worth around £ 120 million (US $ 200 million) crossed the shores of India to far-flung markets of the world.

Scientifically processed under most hygienic conditions and under strict supervision Indian Seafoods are shipped out all the year round, to satisfy fastidious and quality-conscious importers and consumers, the world over.

For Export information:

MPEDA

The Marine Products
Export Development Authority
M G Road,
COCHIN—682016. INDIA.

ASP-M 77/1

R. No. 7558/63

DIP NET — a popular fishing gear in the backwaters and lagoons around Cochin Port.

India ranks seventh among the fishing nations in the world. With an annual shrimp production of 2,21,000 tonnes, India continues to be the single largest producer and exporter of shrimp to the world markets. India is also the foremost supplier of frozen shrimp to Japan and the second largest supplier to the United States.

THE MARINE PRODUCTS EXPORT DEVELOPMENT AUTHORITY

(MINISTRY OF COMMERCE, GOVERNMENT OF INDIA)

COCHIN - 682 016

INDIA

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